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Committee on Environment
and Public Works Washington, D.C.

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EXAMINING FUNDING NEEDS FOR WILDLIFE CONSERVATION, RECOVERY, AND
MANAGEMENT

Thursday, November 15, 2018

United States Senate

Committee on Environment and Public Works

Washington, D.C.

The committee met, pursuant to notice, at 10:07 a.m. in room 406, Dirksen Senate Office Building, the Honorable John Barrasso [chairman of the committee] presiding.

Present: Senators Barrasso, Carper, Fischer, Rounds, Ernst, Sullivan, Cardin, Gillibrand, Booker, Markey, Duckworth, and Van Hollen.

STATEMENT OF THE HONORABLE JOHN BARRASSO, A UNITED STATES
SENATOR FROM THE STATE OF WYOMING

Senator Barrasso. Good morning. I call this hearing to order.

Today we are having a hearing to examine funding needs for wildlife, for conservation, for recovery, and for management.

During the 115th Congress, this Committee has focused on the important tools that wildlife experts use to conserve, to recover, and to manage wildlife populations. The Committee has held hearings; we have debated proposals; we have introduced legislation to improve the status of the regulations and programs that support wildlife conservation. Throughout these hearings we have heard a common refrain: that adequate funding for wildlife conservation tools deserves further attention.

In Wyoming, we understand that the various wildlife conservation tools, including funding, often work in tandem to create success stories on our public and our private lands. Wyoming is blessed with some of the most iconic wildlife in the world. We also have some of the most beautiful vistas, where the elk, the deer, the moose, the bears, sage grouse, antelope live alongside livestock and people.

Wyoming's State wildlife managers are second to none, and they work closely with local, with tribal, and with Federal managers across varied land management jurisdictions.

For Wyoming and other States, it is important to make sure that both Federal and State wildlife agencies have adequate resources, including funding, to perform these duties. A number of proposals in this Committee's jurisdiction address funding for State and Federal wildlife conservation.

The Recovering America's Wildlife Act is State wildlife funding legislation that provides assistance to State wildlife agencies. States, not Federal agencies, have primacy over wildlife management. States take this responsibility very seriously and already contribute and carry out more than \$5.6 billion in conservation efforts annually.

The Senate version of the Recovering America's Wildlife Act authorizes \$1.3 billion to be appropriated annually for State wildlife agencies to conduct fish and wildlife conservation activities. That is a lot of money.

I support robust funding for wildlife conservation at the State and Federal levels, but I believe we must be mindful of where the money is coming from and what other priorities exist for these same resources. I would also like to highlight that this Committee and the full Senate have already passed a reauthorization of the Partners for Fish and Wildlife Program as part of the Wildlife Innovation and Longevity Driver Act, known as the WILD Act.

Did you come up with that, WILD Act, Wildlife Innovation?

Senator Carper. Wild thing.

Senator Barrasso. Wild thing. That was a song.

Private landowners have as much, if not more, of a stake in effective conservation of their lands as anyone else. This legislation would authorize funding for the program for the first time since 2011 at \$100 million a year. It would allow the Secretary of Interior to continue to provide technical and financial assistance directly to landowners to restore, to enhance, to manage private land to improve fish and wildlife habitats. This program should be embraced as a critical tool for future conservation efforts.

The Hunting Heritage and Environmental Legacy Preservation for Wildlife Act, or the HELP for Wildlife Act, which passed this Committee with bipartisan support, also contains the North American Wetlands Conservation Act, which would reauthorize \$50 million for five years to fund grants for water fowl and migratory bird conservation.

I have also placed a priority on reauthorizing the Endangered Species Act, which has not been significantly updated since 1988, 30 years ago. My discussion draft bill modernizes the ESA to better prioritize resources and ensure that funds flow more efficiently and more effectively to species most in need.

During this hearing we have an opportunity to examine these

and other innovative approaches to funding wildlife conservation, recovery, and management. It is my hope that we can come together in a bipartisan way to ensure that those tasked with wildlife conservation, recovery, and management have the tools necessary to preserve our Country's wildlife heritage.

I would now like to invite Ranking Member Carper to make an opening statement.

[The prepared statement of Senator Barrasso follows:]

STATEMENT OF THE HONORABLE THOMAS R. CARPER, A UNITED STATES
SENATOR FROM THE STATE OF DELAWARE

Senator Carper. Thank you for the invitation, Mr.
Chairman.

To you, good morning to Ben, my wingman. The three of us
ran for re-election this year and somehow, we all won, so this
is going to be the lineup for a while.

We are delighted that you are in the lineup here today. We
have seen some of you before and it is good to see you again.
Thanks for joining us and for your own service and your
respective roles, and for being here to help us do a better job
in our respective roles. As the Chairman said, the Committee
has held more than a few hearings this Congress on wildlife
management issues, and our staffs have devoted a great deal of
time to this issue.

I notice one major area of agreement, again, the Chairman
has already mentioned it, and that is wildlife conservation is
severely underfunded. States, Federal agencies and partners
would be able to do, I think, a whole lot more to protect and
recover species with some additional financial resources.

Accordingly, the title of today's hearing is an appropriate
culmination of our Committee's consideration of wildlife matters
in this Congress. As we have heard in our previous hearings,
global wildlife populations have fallen by some 60 percent, I

think, since 1970, when EPA was created. They have fallen by 60 percent for many reasons. Among them are pollution, deforestation, climate change.

The current rate of species extinction is up to 1,000 times the natural rate of extinction. Once species are gone, as we know, they are gone forever, and we do not even know the long-term effects that this biodiversity loss will have on our planet. We need to act sooner, rather than later, to address this extinction crisis by developing a comprehensive wildlife funding strategy and finding a legitimate way to pay for it.

I supported both the WILD Act and the HELP for Wildlife Act, each of which reauthorized valuable wildlife conservation programs. However, I believe that Congress may have to go beyond the status quo of simply reauthorizing programs. And while sportsmen and sportswomen have contributed a great deal to wildlife conservation, we can no longer rely solely on their contributions as the only source of dedicated wildlife conservation funding.

As our Committee wraps up this session of Congress and looks forward to the next, I hope we will consider a bolder wildlife funding strategy going forward that addresses funding needs for both State-managed and Federally-managed species. States and Federal agencies all have important roles and responsibilities in conserving and recovering species, and each

must be more adequately resourced, I believe, to properly fulfill them.

We also have to ensure that States and agencies appropriately balance the needs of our Nation's endangered wildlife with preventing new Endangered Species Act listings. Both are important and warrant additional funding and attention.

States and the Federal Government cannot solve our wildlife funding problems alone, though. This has to be an all-hands-on-deck effort. Tribes, private landowners, nonprofit organizations, and other stakeholders have stepped up, and we need to make sure that they can continue to do so.

Some of our colleagues and witnesses have advocated for an expanded role for State and wildlife conservation and recovery. A meaningful funding solution could actually create an expanded role for States naturally, but without minimizing necessary Federal investments and backstops.

For example, Delaware's State wildlife action plan includes 692 species with conservation needs, including 18 that are federally threatened or endangered. Delaware has experienced remarkable success working with Federal agencies to conserve these imperiled species, and we have done so within the framework of the existing Endangered Species Act.

The Fish and Wildlife Service and the State of Delaware both helped restore habitat for endangered piping plovers and

threatened red knots at Fowler's Beach and Mispillion Harbor just southeast of Dover. As a result of these restoration activities, Delaware was home to 36 piping plover chicks in 2018. I think that is maybe the highest number we have had in about 15 years.

These areas also provide habitat for numerous other species, such as red knots and diamondback terrapins and least terns.

Isn't that a great name, the least terns. That would be a good name for a band. He and I enjoy music a lot.

Senator Barrasso. Well, you have the pipers piping. How many pipers did you have there piping?

Senator Carper. A lot.

Senator Barrasso. Thirty-six.

Senator Carper. Additional marsh, forest, and beach restoration activities will benefit all types of species, including birds, reptiles, fish, and mammals.

The existing State-Federal partnerships work more often than not, as it has in Delaware's case. With additional reliable funding for States and Federal agencies, Delaware could do even more hand-in-hand with our Federal partners and other stakeholders. Habitat restoration activities in Delaware also support ecotourism and the commercial fishing industry. They prevent coastal floodings. Working to conserve and manage

habitat benefits our wildlife, but also protects our communities, drives our economies, and preserves the way of life for a lot of folks who live in Delaware.

I do understand that each State and every species has different needs and challenges, so we look forward to hearing more from our panel today. I also stand prepared to work with our colleagues to tackle wildlife funding issues in the 116th Congress.

Before I close, I just want to say to the two men on either side of me how proud I am of this Committee and the way we work together on infrastructure legislation, the water infrastructure, WRDA legislation, something that was badly needed, not easily done, and I think it is maybe one of the chief accomplishments of the past year, maybe in this present Congress.

Yesterday, the Senate passed by, I think, a 94 to 6 vote the reauthorization of the Coast Guard. One of the provisions that held it up forever, as we know, was the issue of VIDA, also ballast water. It was a hard one to figure out and we did that, and I just wanted to commend particularly our staff, who worked on both of those issues. If we can actually help do a water resources bill, as we did, I think get a big assist on the play with respect to the Coast Guard reauthorization, that maybe encourages me that we can get a whole lot more done in the next

Congress, and I look forward to doing that.

Thank you.

[The prepared statement of Senator Carper follows:]

Senator Barrasso. Thank you very much, Senator Carper.

Senator Cardin, I normally don't call on others, but you are here. If there is anything you would like to add. The Chesapeake Bay seems to be doing well.

STATEMENT OF THE HONORABLE BEN CARDIN, A UNITED STATES SENATOR
FROM THE STATE OF MARYLAND

Senator Cardin. If you offer a Senator a chance to talk, he is going to say yes.

[Laughter.]

Senator Cardin. First, let me congratulate Chairman Barrasso and Ranking Member Carper on a very successful Congress. This has been a Congress, of course, which has been noted for much of its partisan division, but on this Committee, I am proud of the incredible record that the two leaders have provided us.

I join Senator Carper in congratulating Senator Barrasso on his leadership on this Committee and your re-election in Wyoming and Senator Carper's re-election in Delaware. We are going to be together in the 116th Congress and continue this great record.

Senator Carper mentioned the WRDA bill, which, to me, was a great accomplishment of this Congress, but we are not finished yet. This may be our last hearing, I don't know, Mr. Chairman, but I appreciate the fact you are doing it on examining the funding needs for wildlife conservation, recovery, and management.

We have passed some really good bills out of this Committee that I hope we can still get to the finish line in this lame

duck session. That includes your leadership on HELP for Wildlife Act. I very much appreciate your help in the Chesapeake Bay reauthorization, in the Chesapeake Bay Gateway, in the wetlands conservation, in the neotropical birds. There is a lot of really good important legislation we hope to get done yet this year, so I just want to acknowledge that.

Let me use the time, if I might, to introduce Eric Schwaab, if I might do that out of order, since you have recognized me, and save a little bit of time for the Committee.

He is a former Assistant Administrator for NOAA and the former Deputy Secretary for the Maryland Department of Natural Resources. Most recently, Mr. Schwaab served as Vice President of conservation programs for the National Fish and Wildlife Foundation. Prior to that, he was the Senior Vice President and Chief Conservation Officer with the National Aquarium.

Now, I need to sort of brag about that because the National Aquarium is located in Baltimore, Maryland, and it is the national aquarium because it provides national leadership on conservation.

Mr. Schwaab, I just want you to know your legacy lived on as Senator Van Hollen and I were recently joined at the National Aquarium to announce some of the watershed grants and had young children from our schools there learning about what is in the Bay. It just shows that if we are going to preserve our

wildlife, we are going to preserve our environment, we need to deal with the education of young people, and you have been in the forefront of that.

You have also served in leadership positions at the Department of Commerce and directed the National Marine Fishery Service and performed as acting capacity as the Assistant Secretary of Commerce for Conservation and Management.

It is a pleasure to have you here today.

Mr. Chairman, thank you for the courtesy.

[The prepared statement of Senator Cardin follows:]

Senator Barrasso. Senator Carper.

Senator Carper. Thanks, Mr. Chairman.

I want to talk about things that we accomplished in this Congress and how we worked well together. In the last Congress, one of the things that I think a bunch of us were maybe the proudest of was finding common ground on TSCA, Toxic Substance Control Act. The Administration nominated somebody who did not enjoy broad support in the Congress to head up the agency that has jurisdiction within EPA on toxic substances and chemicals.

As the Chairman and I have discussed here just in the last 24 hours, we have a nominee before us that we think could well move toward consideration on the Floor and even do that this month. I think the full potential of our TSCA legislation has not been realized because of the absence of a confirmed leader, and we have the opportunity, I hope, to resolve that before we break for the holidays, and I hope we will do that. Thank you.

Senator Barrasso. Well, that is the intention, and thanks so much for your cooperation on all of this. I think we may actually have another hearing; we are working on the finalization of one more hearing before the end of the year.

We will now hear from our witnesses.

We are delighted to have back John Kennedy, Deputy Director, Wyoming Game and Fish. I will more formally introduce him in a moment.

We also have Mr. Michael McShane, who is an At-Large Board Member of Ducks Unlimited. Thank you very much for being here.

And, Mr. Schwaab, we appreciate you returning, your coming here, and thank you for the wonderful introduce by Senator Carper.

I would like to now introduce John Kennedy. He serves as Deputy Director for Internal Operations at the Wyoming Game and Fish Department. Mr. Kennedy is kind enough to make a second trip from Wyoming to Washington, after previously testifying before us just a little over a month ago. He was here at our hearing to consider successful State conservation recovery, management, wildlife.

He began his career in 2004 at Wyoming Game and Fish Department as a Service Division Chief, and in that position his duties included coordinating the agency's management of wildlife habitat, as well as conservation education. Now, he is the Deputy Director of the whole program and he is responsible for the agency's oversight of fish, wildlife services and fiscal divisions. He also serves on a number of committees of the Association of Fish and Wildlife Agencies and the Western Association of Fish and Wildlife Agencies. Each of these positions has provided Mr. Kennedy with valuable wildlife conservation, recovery, and management experience.

It is a privilege to welcome you back to the Environment

and Public Works Committee, and I would ask that you please proceed with your testimony.

STATEMENT OF JOHN KENNEDY, DIRECTOR, WYOMING GAME AND FISH
DEPARTMENT

Mr. Kennedy. Good morning, Chairman Barrasso, Ranking Member Carper, and members of the Committee. My name is John Kennedy, and I am the Deputy Director of the Wyoming Game and Fish Department. I appreciate the opportunity to testify today about funding for State wildlife conservation, management, and recovery. I provide this testimony based on 26 years of experience with State wildlife agencies.

States have specific authority for wildlife conservation and management within their borders, including most Federal land. In spite of limited funding, State agencies have garnered considerable expertise in response to the growing need to address all wildlife, including at-risk and imperiled species, and to carry out management and conservation responsibilities across the Country.

Since 1937, hunters and anglers have been the driving force for conservation funding in the Country. On average, 60 to 90 percent of State wildlife agency budgets are derived by hunters and anglers. This funding comes from excise taxes on hunting and fish equipment collected under the Federal authority of the Pittman-Robertson and Dingell-Johnson Acts, known as the Wildlife and Sport Fish Restoration Program, which have been a critical source of wildlife conservation funding in the United

States for over 80 years. Clearly, in terms of current funding for State wildlife management and conservation, the Wildlife and Sport Fish Restoration Program is critical.

With respect to the need for additional funding for State-led wildlife conservation, North America's wildlife conservation model is unparalleled. To continue this work, State agencies will need to shore up the logistical and financial underpinnings of the wildlife conservation model. The State wildlife agencies need additional, permanent, and dedicated funding for wildlife conservation in North America.

As you know, last month, this Committee held a hearing and I testified before you on State conservation, recovery, and management of wildlife. The Wyoming Game and Fish Department and the other State wildlife agencies across the Country have many more success stories about reversing species population declines and bringing species back from the brink of extinction.

Every success story is directly related to the States' and their partners' long-term commitments, steady efforts, and stable funding. Inconsistent funding from year to year can compromise this work and lead to prolonged recovery times and even failure. I address several new funding opportunities in my written testimony.

Mr. Chairman, you mentioned some earlier in your introductory comments. On behalf of the State fish and wildlife

agencies, we truly appreciate this Committee's leadership and support on those programs.

However, I would like to address two and highlight those this morning with you.

First, the Recovering America's Wildlife Act. While we know that enacting legislation that provides dedicated funding may be a challenging prospect, we also know it is truly the best solution for wildlife conservation. Recovering America's Wildlife Act should save taxpayer dollars over time by precluding the need to list species under the Endangered Species Act.

Preventing species from listing under the Endangered Species Act will save millions of dollars for State and Federal agencies. And while species listed under the Act need these resources, it is more affordable to deploy proactive conservation actions that will preclude the need to list species and over the long term reduce Federal expenditures while increasing our ability to recover species.

For these reasons, I respectfully ask this Committee to help enact the Recovering America's Wildlife Act this Congress with permanent and dedicated funding.

Second, the Modernizing the Pittman-Robertson Fund for Tomorrow's Needs Act of 2017. This Act proposes to modernize and update the Pittman-Robertson Wildlife Restoration Act of

1937 and will ensure continued funding for this important State wildlife conservation work. Without increasing taxes or existing user fees, this legislation will ensure user pay funding of wildlife conservation for future generations.

The bill clarifies that a purpose of the Fund is to extend assistance to the States for the promotion of hunting and recreational target shooting, and that State expenditures may include spending for outreach communication and promotion of hunting and recreational target shooting. This legislation would allow States to inform and educate hunters and recreational target shooters like our agencies currently do for fishing and boating.

We respectfully request the Committee move the House bill forward as soon as possible and enact this piece of legislation this Congress.

States have a proven track record of recovering species with dedicated funding, as evidenced by over 80 years of success through the Pittman-Robertson Wildlife Restoration Act and the Dingell-Johnson Sport Fish Restoration Act. We can build upon the States' current efforts to conserve the full array of wildlife if afforded the opportunity to do so.

Wildlife conservation began more than a century ago, when hunters, anglers, and other conservationists came together to restore decimated game populations, but it has grown to

encompass way more than that. The new and dedicated funding opportunities addressed in my testimony, such as Recovering America's Wildlife Act and Modernizing the P-R Fund for Tomorrow's Needs Act, are critical to supplement the revenue brought in by hunting and fishing to give States the resources they need to conserve, recover, and manage wildlife.

Thank you for the opportunity to provide this testimony and share some perspectives and work to conserve, recover, and manage wildlife. I would be happy to answer any questions that you might have.

[The prepared statement of Mr. Kennedy follows:]

Senator Barrasso. Well, thank you very much, Mr. Kennedy.
Mr. McShane.

STATEMENT OF MICHAEL MCSHANE, AT-LARGE BOARD MEMBER, DUCKS
UNLIMITED

Mr. McShane. Good morning, Mr. Chairman, Ranking Member Carper, and members of this Committee. It is a privilege to be here from South Carolina today. I am humbled to be in the presence and sitting beside me two obviously dedicated public servants, but I am here with great enthusiasm that I provide this testimony on behalf of the more than 1 million members, supporters and volunteers of Ducks Unlimited.

Founded in 1937 by a group of concerned waterfowl hunters, Ducks Unlimited is still the world's leading wetlands and waterfowl conservation organization. With members and conservation projects in all 50 States, including sister organizations both in Mexico and Canada, DU partners well with its local, State, Federal, nongovernmental, and corporate level support to conserve an astounding 14 million acres of wetlands and wildlife habitat to date, with much work to do.

DU habitat conservation projects provide critical habitat for the diverse array of our continent's migratory bird resources, supporting them on their key breeding, their migratory, and their wintering grounds, especially here in the United States, where the majority of that landscape still remains in private ownership.

DU takes great pride in working cooperatively with both

farmers, ranchers, and foresters to actively help and participate in a number of these programs to successfully achieve that vision of wetlands sufficient to fill the skies with waterfowl today, tomorrow, and forever.

I personally thank both the Chairman and the Ranking Member for having today's hearing. Our Nation's wildlife habitat resources are the backbone of a multibillion dollar outdoor recreational industry that directly supports more than 6 million jobs. Americans spend nearly \$900 billion annually on hunting and fishing, wildlife viewing, and photography, and it is important to note, as someone who comes from a rural community, a number of these jobs provide a critical economic boost in those areas that are needed the most.

I recommend that one of the best ways to evaluate wildlife conservation funding efforts into the future is to take a look at those that have been effective in the past. From Ducks Unlimited's perspective, none have been more impactful than the North American Wetlands Conservation Act, known as NAWCA. Since its enactment in 1989, roughly \$1.4 billion has been provided through grants, but it has generated over \$4 billion in partner contributions.

Even though the law only requires a one to one match, NAWCA's partners, like Ducks Unlimited and other nongovernmental entities and State agencies, routinely generate two to three

times that grant request. So, as of today, more than 5,600 partners have contributed more than that \$4 billion in matched funds.

As an example, the State of Wyoming currently has eight NAWCA projects underway that will conserve more than 45,000 acres of wildlife habitat.

In Delaware, a little over \$6 million in NAWCA funds has generated more than \$12 million in partner contributions to impact 11,000 acres of wetlands and migratory waterfowl.

I am fortunate to come from a State where the impact of NAWCA has been felt greatly. Over \$45 million in NAWCA grant money has generated more than \$350 million in partner contributions where 66 projects have led to the conservation of over 300,000 acres of critical, unique, and, in many cases, ecologically fragile fish and wildlife habitat.

More than 2,700 projects impacting 34 million acres of wildlife habitat have been completed or underway in all 50 States, Canada, and Mexico. Its demonstrated success is a voluntary incentive-based approach to conservation allows partners to work collaboratively with willing private landowners, especially our farmers, ranchers, and foresters, who are the key to any wildlife conservation efforts.

We appreciate the Chairman and Ranking Member's support for reauthorization of NAWCA at \$50 million a year for five years,

and the Hunting Heritage and Environmental Preservation for Wildlife Act, the HELP Act. We strongly believe that NAWCA has proven to be a successful model for wildlife habitat conservation. It is the grant seed money that generates that four-times return on the ground conservation investment. We believe it is a modest Federal investment in habitat conservation that can be stretched beyond the requirements of the law.

We strongly support the reauthorization of our Partners for Fish and Wildlife Program. Additionally, DU supports Modernizing the Pittman-Robertson Fund for Tomorrow's Need Act of 2017. As we consider the future of wildlife conservation funding, it is critical for the stakeholders, especially our partners at the State Departments of Fish, Wildlife, and Natural Resources, to have these dedicated adequate resources to address the problems associated with the listing of any species, particularly those in peril. They have the mandate, I believe they have the talent and drive, and as a former State agency chairman, I have the confidence that those agencies are ready to take that on.

Recovering America's Wildlife Act would authorize those dollars dedicated for those resources, and we strongly support that enactment.

In conclusion, Mr. Chairman, DU continues to support the

Chairman and the Ranking Member as you work through these important policy decisions that will have a long-term impact. We simply ask that, as the Ranking Member mentioned the success of the WRDA bill, I would submit that these four bills can be part of that same legacy today, and I strongly encourage this Committee to move forward on those.

I thank you both very much, and to the Committee members, for the opportunity to be here, and I certainly stand by ready to answer any further questions.

[The prepared statement of Mr. McShane follows:]

Senator Barrasso. Well, thank you very much, and thank you for the wonderful work that Ducks Unlimited continues to do on behalf of all of us.

Mr. Schwaab, you are next.

STATEMENT OF ERIC SCHWAAB, FORMER DEPUTY SECRETARY FOR MARYLAND
DEPARTMENT OF NATURAL RESOURCES & FORMER ASSISTANT ADMINISTRATOR
FOR NATIONAL OCEANIC AND ATMOSPHERIC AGENCY

Mr. Schwaab. Good morning, Chairman Barrasso, Ranking Member Carper. Thank you so much for the opportunity to appear before you today.

As Senator Cardin introduced me, I am a career conservation professional with experience in fish and wildlife work at State, Federal, NGO, and conservation foundation levels. Over the years, I have had the good fortune to work across organizations on multiple conservation efforts. My views expressed here are informed by those experiences, but today are solely my own.

I would like to spend some time focusing on a couple of key elements of the written testimony that I submitted.

First, we have many unmet challenges facing wildlife across this Country. They range from continuing declines of formerly common species to new problems associated with loss of habitat, invasive species, wildlife disease, and changing environmental conditions.

One recent assessment found that as many as one-third of America's species are vulnerable. Forty percent of our native freshwater fish species are at risk of extinction. Amphibian populations are disappearing at a rate of 4 percent a year, and 60 percent of our freshwater mussels are at risk. Monarch

butterflies have faced a 90 percent decline in the past few decades. At least a third of North America's birds are declining.

State fish and wildlife agencies have identified more than 12,000 species of greatest conservation need requiring attention. There are many more species for which we lack status information.

My second major point is that an effective response will require an all-hands-on-deck approach. We must better engage both Federal and State agencies, and private sector partners; and ultimate success will require use of both existing conservation science and management tools and existing and new funding.

Our success in recovering game and sport fish species has at its root the unique partnerships that exist among State and Federal conservation agencies. Both State and Federal natural resource agencies have statutory responsibilities and long histories in fish and wildlife conservation.

Having personally been on both sides of the State-Federal table, I can attest to both the fundamental roles of State agencies and the importance of Federal leadership and expertise, particularly for wide-ranging species.

In my written testimony I discuss the story of striped bass recovery on the Atlantic coast. But whether for a State-managed

species like striped bass, federally managed waterfowl and other migratory bird species, or in the case of interdependent species like horseshoe crabs and red knots, examples of success abound. The most successful programs have at their foundation shared science, collaborative management, and the financial resources to sustain critical work.

My final key point is that more needs to be done. This includes new funding for existing programs and dedicated new funding for broader wildlife conservation efforts. The hunter-angler-based funding model which resulted in the recovery of many of our game and sport fish species focused necessary attention on those target species.

Over the years there have been attempts to broaden wildlife conservation funding at both State and Federal levels. Several States have dedicated portions of their sales tax revenues or implemented voluntary methods such as income tax checkoffs, license plates, and lotteries to fill this funding gap.

Since 2000, at the Federal level, significant new funds have been provided through the State Wildlife Grants program. While these sources are important, they still fall short of today's needs.

A blue-ribbon panel of business and conservation leaders tackled this need again in 2014. The businesses involved ranged from outdoor retailers to oil and gas companies, with all citing

healthy fish and wildlife as essential to their bottom lines. These leaders estimated the need has now reached at least \$1.3 billion annually across the Nation. They said that the magnitude of the solution must match the magnitude of the problem and recommended establishment of a new Federal fund dedicated to preventing wildlife from becoming endangered.

Strong science and management capacities, working relationships among agency personnel, and ability to engage at the community level with landowners has been possible in large part to dedicated funding of the sport fish and wildlife restorations programs. Similar dedicated funding will be necessary to expand on these past successes.

Let me close by emphasizing that taking additional steps now will have lasting benefits not only for our natural systems, but for the people who depend upon them. There is strong agreement that action to prevent wildlife from becoming endangered is the most cost-effective conservation approach.

While actions to prevent further decline or extinction of listed species remain critically important and are sometimes our only option, work to avoid listing in the first place increases the variety of conservation measures available and the likelihood of success. Just like treating a common cold before it turns into pneumonia, taking preventive actions with wildlife to reduce risk to species saves money and reduces risk and

uncertainty for businesses.

Thank you for your time, and I am happy to answer questions that you may have.

[The prepared statement of Mr. Schwaab follows:]

Senator Barrasso. Thank you very much, Mr. Schwaab.

Let me start with Mr. Kennedy.

The Federal Government is supposed to work in partnership with States. Under the Endangered Species Act, they are supposed to do this in order to conserve and recover and manage species, as you stated. As an example, under Section 6 of the Act, States may receive Federal funding for the development and maintenance of conservation plans for their threatened and endangered species.

The Endangered Species Act amendments that I have been working on, our discussion draft, reauthorizes appropriations for the Endangered Species Act for the first time since fiscal year 1992. We are still getting input from stakeholders to see if the specific funding levels, what they should be.

How important is it for the State conservation efforts that we adequately authorize funding for this legislation, and what are the consequences for State wildlife efforts if Federal agencies are underfunded?

Mr. Kennedy. Chairman Barrasso, thank you for the question and, also, thank you for your leadership and this Committee's work on that, it is very important. I would bring up an example. As I testified at the last hearing that we had, we talked quite a bit about grizzly bears. As you know, in 2018, the State of Wyoming spent up to \$3 million on that species, and

the funding level that we received for that was about \$100,000. I think that that is a good example of where the Federal shortfalls in funding can really help the States.

In our discretionary budget, for example, at the Wyoming Game and Fish Department, based on current priorities, we have about \$6 million available at our discretion to move around based on changing priorities. Without the support and additional funding that is being addressed by the programs that we are talking about today, we simply don't have the capacity to do that work.

So, Mr. Chairman, the funding is critical. It is critical for the work that we want to do to promote hunting and recreational shooting, and it is very important for our work on endangered species and to keep species off the list and to implement our State wildlife action plans.

Senator Barrasso. The Partners for Fish and Wildlife Program allows U.S. Fish and Wildlife Services to provide direct technical and financial assistance to private landowners to improve fish and wildlife habitat. Field biologists get to work one-on-one with landowners to restore, enhance, and manage land for the benefit of fish and wildlife.

Now, according to Ducks Unlimited, nearly three-quarters of America's remaining wetlands are in private lands, so how effective is funding through voluntary, incentive-based

conservation like that of the Partners for Fish and Wildlife Program to the on-the-ground conservation, recovery, and management success, as you see it?

Mr. Kennedy. Mr. Chairman, coming from the State of Wyoming, where 50 percent of the land is privately owned, and we have many examples across the Country where there are similar percentages, our work with private landowners and our partnerships with private landowners is critical. We cannot manage wildlife populations without the partnership with private landowners, so additional funding in that regard would be very much appreciated and also put to good use.

Senator Barrasso. About 60 percent of the State wildlife agency funding comes from sportsmen, who pay license fees and excise taxes on guns and ammunition and angling equipment.

I think, Mr. McShane, you made reference in your testimony to how much this contribution is made.

According to a 2016 survey by U.S. Fish and Wildlife Service, a smaller percentage of Americans are hunting in the past year, so that means fewer dollars for State wildlife agencies to invest the conservation efforts that we all agree are so critical.

Do you support modernizing the Pittman-Robertson Fund to allow States to use a share of their allocated funds to promote hunting recruitment and retention? What do you see for that

approach?

Mr. Kennedy. Mr. Chairman, I absolutely see the benefit of that additional funding for that purpose. As you mentioned, hunting has dropped by about 2 million hunters based on that recent survey. That is a decline in total expenditures of 29 percent. At the same time, fishing and wildlife watching has increased.

The biggest difference with this Modernizing the P-R Fund for Tomorrow's Needs Act, as you brought up in your introductory comments, is this would allow States to promote hunting the way that we are currently promoting fishing and boating, and I think that that provides a really good example. We have been able to do that through our funding through the Dingell-Johnson Sport Fish Program that we have, when we have seen an increase in fishing since 2011 of 8 percent, spending up by 2 percent. I think that speaks volumes to the fact that with additional dollars the States can do the same with hunting.

Senator Barrasso. Mr. McShane, could I ask you to maybe respond to both of those two, because it was your statistics that I quoted about Ducks Unlimited, nearly three-quarters of remaining wetlands are on private lands and some of the things you are doing there, and then, as well, what we need to do to enhance additional income?

Mr. McShane. Mr. Chairman, I actually could give you the

perspective of both as a private landowner --

Senator Barrasso. That would be very helpful. That would be very helpful to the Committee.

Mr. McShane. Perhaps to give a little bit of context, as a family ownership of a large timber recreational property in the lower part of South Carolina, it is an ecosystem approach. If we try to manage our interests and ignore the surrounding community, it becomes very challenging. When we have the opportunity to work with our neighboring landowners, including Federal and State partners on that, we have a much more effective and, I believe, frankly, much more impactful opportunity that really makes it more efficient in our operational plan by doing so, so I certainly would encourage that those resources be provided.

I have seen that time after time in our area, and during my tenure as a board chairman of a State agency and former Director Frampton, who I had the privilege of having as director, I believe is still here in the room, we strategically looked at his operating plan to be able to work with landowners. He could not do his entire objective if he did not have that cooperation with our private landowners.

Senator Barrasso. I appreciate your comments.

Mr. Schwaab, anything you would like to add on either of that? If not, I will just turn the questioning over to Senator

Carper.

Mr. Schwaab. I would just say my experience in multiple situations is that private landowner engagement is incredibly important not only for achieving the on-the-ground results that these gentlemen spoke to, but to create the kind of buy-in that we want to sustain the successes over the long-term.

I also agree that working to enhance participation in traditional sports of hunting and angling is important. At the same time, we also need to sort of broaden the scope of participants not only in taking advantage of these resources, but in helping to pay for them.

Senator Barrasso. Thank you.

Senator Carper, we have had some broad agreement so far.

Senator Carper. That is good.

I am sorry, I had to go out of the room to take a call and I may have missed what the responses were to the Chairman's questioning, but I want to build on broad agreement.

This is an excellent panel, by the way, and I don't say that lightly. This is a good one. I don't know what we are paying you guys, but you are worth it. Actually, I know we are not paying you anything. I commend our staffs for finding you and convincing you to come today, and a couple of you to come back for return visits.

Maybe the first thing I could start off with is just to ask

you to tell us where you think the consensus lies in terms of your views of what you have presented to us. I hear things that sound like echoes from one another, similar.

Mr. Kennedy, are you one of the Majority witnesses? We call them Majority witnesses, as opposed to Minority witnesses.

Mr. Kennedy. Yes.

Senator Carper. With a name like John Kennedy, you could probably be either one.

[Laughter.]

Senator Carper. We call that dual-hatted in the Navy.

Mr. Kennedy. Thank you, Ranking Member Carper. I think you are asking the question, is there consensus up here at the table?

Senator Carper. Yes. Where do you see the areas of consensus? It is helpful to us to build consensus. One of the things we are pretty good at on this Committee is finding middle ground. We have talked of a couple areas where we have done that in recent weeks, months, days, actually.

Where is the consensus that you would really like to highlight for us?

Mr. Kennedy. Ranking Member Carper, what I am seeing and hearing is consensus with respect to the successes and accomplishments of the State fish and wildlife agencies during the last many, many years. Also, at the same time, I am seeing

that there is consensus with respect to there is an urgent need for additional funding, and that the expertise and the responsibilities and the scope of the State fish and wildlife agencies' work goes far beyond just those species that are hunted or fished.

So, there is consensus that it is of value to the environment, it is of value to the economy, and it is certainly more cost-efficient for us to have additional funding to do proactive work to keep species, for example, off the endangered species list, as opposed to waiting until it is too late.

Senator Carper. An ounce of prevention is worth a pound of cure.

Mr. Kennedy. Exactly. Exactly.

I would just mention, Ranking Member Carper, I also hear a lot of consensus with respect to additional funding through the P-R Program for the States to be able to promote hunting and hunter recruitment and retention and reactivation similar to how we are able to promote fishing and boating.

Senator Carper. Okay, good. Thanks.

Mr. McShane, what part of South Carolina are you from?

Mr. McShane. Ranking Member Carper, I am actually from Charleston, South Carolina.

Senator Carper. All right.

Mr. McShane. That is exactly where we think the two

rivers, the Cooper and Ashley Rivers, form to create the Atlantic Ocean. That is our perspective there, sir.

Senator Carper. I like that. We describe Delaware as the State that started a Nation.

[Laughter.]

Mr. McShane. Touche, sir.

Senator Carper. Because we were the first to ratify the Constitution, 231 years ago, on December 7th. But who is counting?

Mr. McShane. Understood.

Senator Carper. All right, take it away.

Mr. McShane. Ranking Member, I submit that the consensus from both the perspective as representing Ducks Unlimited this morning, but as a private landowner and seeing the need particularly for the recruitment and the retention. In an area like where I live, where we are seeing probably unbridled development and growth in a population base, I actually believe that we might be seeing one of the largest migrations of our population since some time ago that is coming to, particularly, our part of the Country. So, we know from a percentage standpoint many of those coming in have not necessarily had that experience, yet one of the beauties of our area is that we offer these natural resources that add to the quality of life.

So, I think the State agencies and, frankly, your Federal

agencies as well, have been very supportive of promoting because they understand it really just takes that one generational change. I often hear from many of my peers, who may now live in a more urban environment, talk about the days that they would be with their grandparents and would fish or hunt, and they lost that. And I think once it is lost, it is lost forever.

So, my own family, I have the pleasure and privilege of being the father of three daughters, but I have made sure that they all have that opportunity and appreciate that, and I want to continue to send that --

Senator Carper. Do you think of them as sportswomen?

Mr. McShane. Pardon me, sir?

Senator Carper. Sportswomen?

Mr. McShane. Spokeswomen?

Senator Carper. Sports. Sports. As opposed to sportsmen.

Mr. McShane. Oh, excuse me. I am sorry, Ranking Member, I need to adjust my hearing aid, from being a long-time shooter.

They are sportswomen, and they take great pride in that.

Senator Carper. Good.

Let me go to Eric. Same question. We are looking for consensus.

Mr. Schwaab. Thank you, Ranking Member Carper. I agree completely. I think there is strong consensus here that we not only need to continue to bolster the existing tools and

mechanisms at the State and Federal levels, but that significant new funding is needed, much more diverse funding, and also dedicated long-term funding, we have heard that word come through clearly repeatedly, to ensure that both the State agencies and the Federal agencies have the consistency and the ability to address these big challenges that we have all spoken to.

Senator Carper. All right, thanks.

I have to run up to another hearing. I am going to come back and try to come back while we still have time to maybe ask one more round of questions, Mr. Chairman. Thank you very much.

Senator Barrasso. Senator Rounds.

Senator Carper. Could I just say something? When I come back, one of the questions, just to telegraph my pitch, I am going to focus on funding, I am going to focus on especially leveraging Federal funding. Some of you mentioned this in your comments. In our day and age when our budget deficit for last year it was like \$750 billion; this year it is expected to be \$950 billion, and we are looking for ways to save money on the spending side and to leverage Federal money more effectively. So that is what I am going to ask. Thanks.

Senator Barrasso. Senator Rounds.

Senator Rounds. Thank you, Mr. Chairman.

Deputy Director Kennedy, in your position you help

coordinate implementation of Wyoming's State wildlife action plan. With any large-scale government program, planning ahead of time is critical to the execution of the plan. That is why I was very pleased to see Senator Rische introduce the Recovering America's Wildlife Act. Directing additional Federal funds to implementing State conservation plans now will save us from needing emergency funds later, when it may be too late to act.

My question is, at the State level, can you speak to the value of more consistent Federal funding for conservation?

Mr. Kennedy. Mr. Chairman, Senator Rounds, certainly, as you mentioned, State wildlife action plans are critical plans, and they are not annual plans, as you know; these are multi-year plans that require multi-year funding, which makes inconsistent funding very difficult for us to implement. So, at the State level, in Wyoming, for example, we have 800 species of wildlife in Wyoming. We have 229 species right now with a special status, with the species of greatest conservation need designation.

I mentioned earlier in my testimony that looking at our current priorities right now, with our current budget in Wyoming, we have about \$6 million of discretionary money to meet the expectations and the needs of our constituents in Wyoming, and that is not a lot of money, so we don't have a lot of funding capacity to be able to spend on 229 species, let alone a

few of those species. So, any additional funding that we could secure, multi-year type, stable, consistent funding to put towards our non-game program and our special status species and our State wildlife action plan would be critical.

Senator Rounds. So, if we could, number one, set up the program to where you would know, years in advance, that there was an ongoing funding program available, there would be a significant benefit to wildlife and to conservation on a State-by-State basis, particularly if the States were allowed to make some of those decisions themselves.

Is that of value to you, to be able to make the decisions on a State-by-State basis, and do you think that is the direction that we ought to be going?

Mr. Kennedy. Mr. Chairman, Senator, absolutely. Absolutely. And I think the State wildlife agencies have a proven track record with respect to that. I think that the decisions that we make, we are as transparent as possible; we are involving other stakeholders. The partnerships that have been maintained and created by the State wildlife agencies to implement wildlife conservation in this Country have been unparalleled.

Senator Rounds. Some of us have expressed concern because, in the past -- and I am going to ask several of you the same question. I am a firm believer that we should have an ongoing

process in place so that States could understand and recognize and see the benefits of a continuing revenue source. But what concerns is it that we also address an issue which a lot of landowners out there have expressed concerns, and that is the Federal Government is not necessarily the best neighbor to have in the case of permit and easements, because once we get a permit and easement on some land, it would appear that the Federal Government then is not necessarily the best neighbor in the world.

Do you think there is a fair tradeoff to having something short of permanent easements restricted on land as a tradeoff to having ongoing revenue so that we are not changing the management decisions for generations to come? Is there a discussion there that needs to be held?

Mr. Kennedy. Chairman Barrasso, Senator, I think there is a discussion to have. We certainly would welcome any discussion. Additional funding for easements, whether they are temporary or in perpetuity, I think there are times when those permanent easements make sense. And, of course, we are not going to move forward, the States don't move forward on easements without those willing landowners, and we are going to move forward on an easement on terms that are in agreement with the private landowner.

Senator Rounds. Would it be fair to say that perhaps more

landowners could consider some easements if they were explained to them that they didn't have to be permanent and that we could do shorter term easements? CRP has worked because it is a 10-year plan or less. But permanent easements, in a lot of cases people are saying now I am not sure I want the Federal Government to be a guaranteed neighbor of mine for generations to come, where the next generations are restricted in their determinations.

Once we get past the point where we start looking at ongoing permanent revenue sources, we kind of give up oversight, and I have a concern about it, but it is something that I would really like to see us address.

I am going to come to Mr. McShane. Mr. McShane, your crew, Ducks Unlimited, is one of the finest organizations out there when it comes to wetlands conservation and so forth. Do you think it is time we start addressing the issue? Because a lot of landowners out there are saying if it is a permanent issue, it has hurt my kids; we lose that direction.

Is it time we start making darn sure that they have explanations made that they don't have to necessarily do permanent easements in order to participate with the Federal Government or with the State government in providing for those conservation land areas?

Mr. McShane. Mr. Chairman, Senator, I need to give you

three perspectives on that in terms of the hats I wear: as a board member of Ducks Unlimited, but also as a former State agency chairman, and as a private landowner who is involved with properties under easement.

Certainly, the first is that they are all voluntary. So my expectation would be that the entity that is working with the landowner needs to be very clear with great clarity about what the program is being offered; that if in fact there are current programs, you identified CRP being one previously that had a shorter time frame, but if it is a permanent easement, then I expect great clarity has been made, because this is an issue that we are starting to see in certain markets, where the second generational or if it was transactionally sold to another owner, that there just to be a great education that takes place about that.

In our area, most of our easements are going to be held by, generally, nonprofits, whether it is a local land trust or nature conservancy, or even Ducks Unlimited; and I think that they understand that expectation that has to be done. There are, obviously, some other programs that are already in place that allows shorter time, and I think if that is what the landowner is willing and really thinks is in their best interest, certainly we would encourage that that be certainly offered to them.

But I stress again that this has always been a voluntary program to begin with and that great clarity and diligence. These are not transactions that generally take place. Even though I might have the most experience in my area of dealing with easements, it is still probably an 18-month transaction from start to actually closing on that before I can get that done, and I have spent some diligent time and, frankly, some good legal time on that.

Senator Rounds. Thank you. Thank you.

Mr. Chairman, thank you. I appreciate it. I just think it is really important that as we move forward with permanent funding, that we also talk about the need to make sure that we are not trying to make decisions for two and three generations ahead of us. But I really like the idea of coming up with a plan for a long-term program to provide those States with some sort of a revenue source that they can count on year in and year out.

Thank you.

Senator Barrasso. Thank you so much, Senator Rounds.

Senator Booker.

Senator Booker. Mr. Chairman, thank you very much. I am glad this Committee is focused really intensely on wildlife conservation because the situation is dire globally. We have lost about 50 percent of wildlife on the planet Earth in just

the last 50 years. Reports are that about 1 in 6 species will go extinct or threatened with extinction in the next century, and today species are going extinct 1,000 times faster than natural extinction rates.

Mr. Schwaab, in your written testimony you speak to the massive potential for the loss of biodiversity in the way that I was just describing. Can you elaborate a little bit on that and can you explain how we are all interconnected and how that will very much affect, if not threaten, humans as well?

Mr. Schwaab. Thank you, Senator Booker. We only have a few minutes, but let me maybe perhaps reach and elaborate on one example that is in my written testimony and that I mentioned verbally, and that is the plight of monarch butterflies.

There has been a huge amount of attention to an estimated 90 percent declines in monarch butterflies across North America. This is a species that many of us grew up seeing sort of in our backyards during their annual migration north and south. There was a lot of concern that monarch butterflies were heading toward listing, and that led to both Federal and State agencies, as well as my former organization, National Fish and Wildlife Foundation, investing heavily in monarch butterfly restoration.

The important thing to mention is that not only is, as an iconic species, the loss of monarch butterfly in and of itself important, but the monarch butterfly is emblematic of lots of

other pollinators, other butterfly species that we either know nothing about or know are in great decline or bee species that farmers across the Country depend upon for pollination services. So, the plight of these species is certainly important from an intrinsic perspective. But is also important from an economic perspective. And in the case of monarch butterflies we see an iconic species that really is, for lack of a better term, kind of a flagship species for a much broader array of species that we depend upon for important services.

Senator Booker. And that is really my point, that if pollinators are in crisis, the very existence of humanity is in crisis or the food systems are in crisis. This is a deeply interconnected biodiversity in this planet, not only in our Country, which leads me to the next question I have very quickly.

Are there a need, then, for us to be looking 50 years in the future and doing things now for State level conservation of at-risk species? Is additional funding really needed for the work that the Federal agencies are doing? I understand about State and local, but for the folks that are looking at the whole playing field, are additional resources needed to protect those species that are already ESA listed, and can you speak to that, in the 90 seconds you have left?

Mr. Schwaab. So, absolutely. Just very quickly, I think

that is one of the values of State wildlife action plans not only at the State level, but around the fact that they are developed very much in collaboration with Federal authorities at the U.S. Fish and Wildlife Service, with other agencies and the like, and they are able to look out 10 years or more to think about prioritization of some of the species of concern.

With respect to some of the species that are already listed, absolutely I think that not only, again, are they intrinsically valuable, but there are multiple examples around species that have drawn attention to broader ecosystems. The longleaf pine forests of the southeast, which are being restored by the thousands of acres as a result of attention that was brought to them initially around conservation of the red cockaded woodpecker, a listed species. So, continuing to invest over the long-term in those listed species not only lifts up those species, or at least prevents their further decline, but lifts up habitats and other species around them.

Senator Booker. Thank you.

Mr. Chairman, thank you very much.

Senator Barrasso. Thank you.

Senator Duckworth.

Senator Duckworth. Thank you, Mr. Chairman.

I am going to go back to the monarch butterfly, since it is the State insect of Illinois. Who knew we had a State insect?

But we do.

In Illinois, our State wildlife action plan seeks to protect dozens of species, ranging from bats and butterflies to birds and mussels. These conservation actions benefit both wildlife and people, as your conversation with my colleague from New Jersey covered, but, to reiterate what we have heard today so far, I believe that additional funding for these efforts, as well as for Federal agencies, will go a long way in Illinois and across America, which I think is what you are sort of getting at.

Right now, the U.S. Fish and Wildlife Service is studying whether to list the monarch butterfly as an endangered species. I understand that funding proposed in the Recovering America's Wildlife Act could play a critical role in helping recover a species, but unfortunately, though, there are thousands of species of greatest conversation need, and the Recovering America's Wildlife Act does not include a prioritization mechanism.

So, Mr. Schwaab, do you have any ideas of how this might better prioritize the most truly imperiled species? Such changes I think could help ensure that species like the monarch butterfly are prioritized across State lines. You mentioned State plans, but this butterfly migrates, so why is a butterfly that is known mostly for the great displays in Mexico, why is it

a big deal for Illinois? Because we are one of the major stopping points on their migration route.

Can you talk about the efforts underway in my State, as well as how other States are prioritizing this and how we can better fund so that there is a comprehensive strategy and how we can better fund these strategies?

Mr. Schwaab. Thank you, Senator Duckworth. I think the monarch situation is an example where work at the State level goes hand-in-hand with Federal expertise and engagement because of the sort of expansive nature of that migration and the need to coordinate across State lines. I do think that the State wildlife action planning process, most of which are in their second generation now, has demonstrated the ability of States not only to work within the State with stakeholders, but also to work with experts from academia, from the Federal agencies and other places to achieve the kind of prioritization that you speak to.

The last thing I would say is that a number of the States I know have worked not only to coordinate within their State or with relevant Federal agencies, but amongst themselves regionally. So, the Northeastern Association of Fish and Wildlife Agencies, each State agreed to pool a small amount of money to look at a cross-region analysis of their respective State wildlife action plans, and through that analysis they were

able to identify species of common interest and achieve better coordination for maximum effectiveness and efficiency.

Senator Duckworth. Thank you. So, do you think this bill should require that States use a portion of their funding to help recover threatened and endangered species as part of the Act?

Mr. Schwaab. I think that is a challenging question because the need is so great at the State level that to decide to sort of carve out a portion of those dollars specifically for already listed species could detract from the ability to get out in front of some of these other broader diversity challenges that we have.

In a perfect world, we would invest fully in executing recovery plans, investing in and executing recovery plans under the Endangered Species Act and we would allocate appropriate monies both at the State level and at the Federal level to the broader diversity initiatives and needs that are out there.

Senator Duckworth. Okay. Thank you.

Associated with that, let's talk about funding for fighting invasive species. We have a real issue in Illinois. In fact, 62 percent of our wildlife species determined to be in greatest need of conservation are threatened at least in part because of invasive species, especially if you look at the fish and what is happening with the Asian carp population, decimating our native

fishes.

Mr. Schwaab, how is combatting the threat from invasive species addressed in the Recovering America's Wildlife Act and, specifically, can Illinois use these funds to execute our strategy to combat invasive species found in our wildlife action plan? Because it is not just about conservation; it is also about combatting the invasive species, as well.

Mr. Schwaab. My understanding is most certainly, specifically as it relates to threats of targeted species within those State wildlife action plans. I know in my home State of Maryland there are funds that are expended under the existing State wildlife action plan process to address invasive species that imperil or otherwise threaten targeted species within that plan.

Senator Duckworth. Thank you. I am over time.

Thank you, Mr. Chairman.

Senator Barrasso. Well, thank you so very much.

I have just a couple more questions, and I think Senator Carper is coming back and we may have some other members joining us.

Mr. Kennedy, we have spoken in the past about all the great work Wyoming does in managing wildlife. This includes monitoring populations carefully to detect issues and acting quickly to mitigate any harm. Many of these actions are

directed by the State wildlife action plan, so can you talk a little bit about the current funding and implementation of the Wyoming State wildlife action plan and how that funding may differ from funds from general wildlife management and what the Game and Fish is doing in terms of prioritizing funding for species of concern?

We had former Governor Freudenthal here, we had current Governor Meade both talking about \$50 million being put in from State coffers in dealing with the grizzly bear in an effort to do everything right and then doing everything right and having a new listing, so can you just talk a little bit about the State responsibility and role in priorities?

Mr. Kennedy. Certainly, Mr. Chairman. Thank you for the question. It speaks to the urgency of the funding need at the State level, for sure, with respect to sensitive species. I had talked about, a little bit ago, in Wyoming we have 800 species of wildlife, and we have talked about that before. We have 229 species that are listed as species of greatest conservation need in the State; there are 80 birds, 51 mammals, and 28 fish. That requires a lot of work.

And then I talked about, at the State level, the amount of funding we have to move around and adjust for certain priorities, and we simply don't have the capacity to put into the non-game program in the sensitive species. So, this funding

that comes in, it is a similar model with respect to the current funding model with Pittman-Robertson. It can be used for those species that do not have a secure source of funding like P-R program currently has; would allow us to allocate significant dollars to our non-game program.

Right now we use very limited State wildlife grant funds for our State wildlife action plan. We did receive some general fund support in the last several years. We have lost that in Wyoming; we no longer receive any general fund support for any of our programs in the department. But that did assist in the past with respect to sensitive species. And we have, for the bulk of the funding going to our State wildlife action plan, it is Wyoming Game and Fish Commission funding.

Senator Barrasso. Let me just take a temporary break, waiting for Senator Carper to return, unless either of you would like to comment on any of those topics we have just been discussing, Mr. McShane or Mr. Schwaab.

Mr. McShane. Mr. Chairman, I would just say, as a private landowner, if the private landowner, in terms of our sustainable business plan and our operational plan for our land, that certainty and length of time is always prudent and certainly gives the incentive of why we are going to invest what we do, and I would simply submit that if the State wildlife agency has the same benefit of knowing that they are going to have a period

of time, strategically I think it makes it a more efficient plan.

I would also just encourage that it be given flexibility to work with private landowners. Some private landowners, like myself, may have the resources to be able to do some of the work that is needed, but other landowners may not have those resources, and at times I think that we worry too much locally about whether that is public funds or private funds at times, when really it is an ecological issue, and if you don't treat it there, it is going to just continue.

Senator Barrasso. We have another Senator who has arrived.

Mr. Schwaab, anything quickly you want to add on that?

If not, then I am happy to turn to Senator Markey to continue with the questioning.

Senator Markey. Oh, great. Thank you. Thank you, Mr. Chairman. We welcome our witnesses.

Eric, it is good to see you again. I remember when you testified back in 2009 before the Select Committee on Energy Independence and Global Warming that I was chairing over in the House. At that time, you talked about the need to build community resilience to sea level rise by restoring natural shoreline buffers.

We already know that climate change is affecting our wildlife. Scientists estimate that the total number of mammals,

birds, reptiles, amphibians, and fish has declined by more than 50 percent since 1970 and that climate change threatens to accelerate this crisis.

For example, in the Northeast, moose populations are declining due to climate change. Last winter, 70 percent of the moose cows died due to a booming tick population caused by a mild winter.

In your work as Director of the National Marine Fishery Service and Deputy Secretary of the Maryland Department of Natural Resources, how has and how will climate change affect wildlife?

Mr. Schwaab. Thank you, Mr. Chairman, Senator Markey. Thanks for that trip down memory lane. I guess this issue of climate resilience has not gone away.

Senator Markey. No.

Mr. Schwaab. I think that changing climates are affecting wildlife in all imaginable ways across the Country, from the loss of shoreline habitat in the case of places where we have had hardened shorelines that are now challenged by sea level rise and inundation events to some of the issues that we are facing in western forests and grasslands right now with respect to unusually dry conditions, coupled with trees that have been affected by insect infestations that have marched forward during mild winters, and, finally, last but not least, changing

rainfall patterns that are presenting huge challenges for aquatic species in a lot of different ecosystems.

Senator Markey. What are the resiliency measures that we can put in place to protect wildlife, to help them cope with climate change?

Mr. Schwaab. They probably range dramatically across the scenarios that I just described, but when I was here in 2009, I suspect, I don't recall specifically, that I was probably talking about work that the State of Maryland was sponsoring to enhance resiliency in shorelines and, in fact, to sort of shift the burden of proof away from hardened shorelines in favor of more dependence on natural systems. We have seen that throughout the mid-Atlantic now being utilized very heavily to allow for sort of natural buffering of storm events both for wildlife, as well as for communities.

I think there is a lot of water planning that needs to happen in anticipation of changes that are underway in the fisheries arena, Senator Markey, where you are also very familiar. Gulf of Maine, ground zero for warming oceans and responding to some of the changing migrations.

Senator Markey. What is going to happen to our lobster pod in Massachusetts, Cape Cod? They need cold water and, outside of the Arctic, we are the fastest warming body of water on the planet, so, as this water gets warmer and warmer, the code and

the lobster are looking for cold water, so they are heading to Maine and towards Canada, and we can see it. Our fishermen see it, our lobstermen see it. Talk about that a little bit.

Mr. Schwaab. Well, right. There are two fundamental responses. One is mitigation, and that requires a lot of attention. But despite whatever mitigation steps we might take, we have certain realities that are already set in motion. And adaptation, building resiliency into, again, not only our natural environments and the way that we protect our natural environments, but also use those natural environments in ways that can help protect coastal cities or even inland cities from inundation and flood events. It is a major sort of planning and reset responsibility in many places around the Country.

Senator Markey. We are starting to see fish species from Maryland coming up towards New England.

Mr. Schwaab. I am a Chesapeake Bay fishermen, so can you send them back?

Senator Markey. No, but that is happening.

Mr. Schwaab. Oh, absolutely, yes.

Senator Markey. Talk about that a little bit.

Mr. Schwaab. We have seen, it has been a big issue on the Atlantic coast, the migration of sort of the center of the summer flounder, the fluke population that has moved north and east, very well documented, creating great challenges for

fisheries managers and fishermen on the coast.

You spoke to concerns about lobster. We already saw challenges in New England Sound and with the southern New England lobster population now. People are beginning to express concerns about the Gulf of Maine population. It goes on and on.

Senator Markey. Thank you.

Mr. Chairman, I very much appreciate it. Thank you.

Senator Barrasso. Well, thank you. Thank you for your thoughtful questions.

I want to thank all of you for being here. I think Senator Carper has been delayed in another hearing, which is critical for his attendance, but I am very grateful that all of you would be here to share in a very collaborative way and a constructive way some of the things I think we can all do to deal with an issue that we think is very critical for our States, for our Country, and for the planet, so thanks so very much. I appreciate it.

Some of the other members may submit written questions, too. We ask that you respond promptly. They will all be part of the permanent record.

Thank you. This hearing is adjourned.

[Whereupon, at 11:24 a.m. the committee was adjourned.]